REMARKS

The Examiner is thanked for the thorough examination of the present application. The FINAL Office Action, however, continued to reject all pending claims 38-52, 55, and 56. In response, independent claim 38 has been amended, and claims 39-52 and 55-56 remain pending in this application. Specifically, Applicant has amended claim 38 to more clearly identify a novel and non-obvious feature of the claimed embodiments, by specifying that "the slots arrange in a concentric octagonal pattern". Support for this limitation can be found in the original application at least in Figs. 3A through 3G of the application. Accordingly, the amendment adds no new matter to the application.

The amendment renders the rejections moot. Notwithstanding, Applicant sets out the following additional distinguishing remarks.

Rejections Under 35 U.S.C. 103(a)

The Office Action rejected claims 38 and 49-50 under 35 U. S. C. 102(b) as allegedly unpatentable over *Shishido* et al. (US 6,294,831) in view of Zhang (US 2003/0136546). In this regard, the Examiner admitted that *Shishido* et al. do not explicitly disclose the circular pattern is a concentric circular pattern or a concentric octagonal pattern. The Office Action, however, cited Zhang as allegedly disclosing this feature.

With respect to independent claim 38, that claim has been amended to recite:

> 38. A ball grid array package, comprising:
> a semiconductor chip/die affixed to a ball grid substrate; the ball grid substrate having a series of balls; and
> a heat spreader mounted to the semiconductor clip/die and the ball grid substrate opposite the series of balls; the heat spreader having a pattern of slots, not completely piercing the heat spreader, therein***, the slots arrange in a concentric octagonal pattern***.

(*Emphasis Added*). Claim 38 patently defines over the cited art for at least the reason that the cited art fails to disclose the features emphasized above.

Again, the Office Action admitted that Shishido fails so disclose that the circular pattern is a concentric circular pattern or a concentric octagonal pattern. With regard to the secondary reference of Zhang, Zhang discloses the guiding vanes are concentric circular patterns (see patent cover fig., abstract, and claim 2). Zhang, however, FAILS to teach or disclose the guiding vanes can be a concentric octagonal pattern. Accordingly, as amended, independent claim 38 clearly defines over the combination of Shishido and Zhang (even if properly combined).

Thus, Applicant respectfully submits that the cited art is deficient for the purpose of rendering claim 38 unpatentable. In particular, Applicant respectfully asserts that that cited arts do not teach or otherwise disclose at least the limitations emphasized above in claim 38.

As a separate and independent basis for the patentability of claim 38, Applicant submits that the combination of Zhang and Shishido does not render claim 38 obvious. In this regard, the Office Action combined Zhang with Shishido to reject claim 38 on the solely expressed basis that "because as taught by Zhang, such concentric circular patterns would improve heat dissipating efficiency." Since this limitation (concentric circular patterns)" has been deleted from claim 38, this basis for combining Zhang with Shishido is no longer applicable to claim 38. Accordingly, the rejection should be withdrawn.

Further, the rationale is both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103.

In this regard, the MPEP section 2141 states:

> Office policy has consistently been to follow *Graham v. John Deere Co*. in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquires enunciated therein as a background for determining obviousness are briefly as follows:
>
> (A) Determining of the scope and contents of the prior art;
>
> (B) Ascertaining the differences between the prior art and the claims in issue;
>
> (C) Resolving the level of ordinary skill in the pertinent art; and
>
> (D) Evaluating evidence of secondary considerations.
>
> . . .
>
> BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS
>
> When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:
>
> (A) The claimed invention must be considered as a whole;
>
> (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
>
> (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and
>
> (D) Reasonable expectation of success is the standard with which obviousness is determined.
>
> *Hodosh v. Block Drug Co., Inc*., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

Simply stated, the Office Action has failed to at least (1) ascertain the differences between and prior art and the claims in issue; and (2) resolve the level of ordinary skill in the art. Furthermore, the alleged rationale for combining the two references (i.e., because concentric circular patterns would improve heat dissipating efficiency) is no

longer applicable to the amended claim 38. For at least these additional reasons, Applicant submits that the rejections of claim 38 is improper and should be withdrawn.

Since claims 39 – 52 and 55 - 56 are dependent claims that incorporate the limitations of claim 38, Applicant respectfully asserts that these claims also are in condition for allowance. Additionally, these claims recite other limitations that can serve as an independent bases for patentability.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this submission. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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By: _____

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